

July 26, 2011
20 Azalea Place
Novato, CA 94949

Dave Walls, Executive Director
California Building Standards Commission
2525 Natomas Park Drive
Suite 130
Sacramento, CA 95833-2936

**Subject: Proposed Express Terms for Title 24 Regulations regarding
Public Swimming Pools, dated 3/8/11**

Mr. Walls,

I have several comments to make regarding the Title 24 Proposed Public Pool Regulations "Express Terms" that are dated March 8, 2011.

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CALIFORNIA BUILDING
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Section 3102B, Definitions

Add definitions for:

“AED” is “Automated External Defibrillator”

“AHA” is American Heart Association

“Automated External Defibrillator (AED) unit” is a life-saving device that may be used when an individual suffers a sudden cardiac arrest

“NSF” is NSF International (so what does NSF stand for? Does it stand for National Safety Federation?)

Section 3116B, Toilet, Shower and Dressing Facilities

This section must include requirements for diaper changing areas within all restrooms. If diaper changing areas are not provided in the rest rooms, then the adults will change diapers in the pool area – without washing their hands with soap and water - which will cause the pool area / pool water to become contaminated with fecal material.

Please refer to my suggestions made on this topic for the recently proposed Title 22 Regulations, dated June 23, 2011:

Suggestion: Add section to require use of Swim Diapers

Young children who are not toilet trained must wear swim diapers.

For larger public pools with pool staff members on site: Disposable swim diapers are to be made available for purchase by the pool operator. Children in swim diapers are limited to using the children's pool area.

For public pools with no pool staff members on site (e.g. apartment complex pools, motel/hotel pools): Signage shall be provided to read: "Young children who are not toilet trained are required to wear swim diapers while in the pool area."

Pool operators are to provide diaper-changing facilities in the restrooms (for both sexes) and all diapers are to be changed in the restroom areas. The changing of diapers on the pool deck or in the pool area is prohibited.

And so there should be signage that:

"Changing of diapers on the pool deck or in the pool area is prohibited."

Section 3120B.5 Artificial respiration and CPR sign

An illustrated diagram of artificial respiration and CPR procedures as recommended by the American Heart Association shall be posted.

The AHA guidelines for CPR are updated periodically, based upon the latest research. For example, they were updated in 2005 and then again in 2010. In my opinion, it would be prudent to provide signage of:

- A graphic of the AHA Cardiac Chain of Survival (see attached graphic). The chain of survival graphic will prompt the bystanders to summon help, to begin to provide CPR, and to attempt to find an AED unit. The first three links contain steps that bystanders can provide. Link 4 is provided by the professional emergency medical responders (ambulance) and Link 4 is provided at the hospital. The graphic of the chain of survival will prompt the rescuers to take the appropriate action – whether they have received formal training or not.
- Instructions for Compressions-Only CPR - Please refer to the attached article regarding hands-only CPR for bystanders. If a rescuer has never taken a formal CPR or CPR with AED course, then that type of individual would need to refer to instructions. Compressions-Only CPR is better than no CPR.

Section 3120B.6 Emergency Plan

The emergency telephone number 911 or the number of the nearest emergency services shall be posted.

Please refer to my suggestions made on this topic for the recently proposed Title 22 Regulations, dated June 23, 2011:

Section 65539 Lifesaving and Control of Pool Users

[Require]:

Instructions to dial 911, and the telephone number of the nearest County Dispatch Center shall be posted.

*It is now likely that people at the scene will dial 911 from a cell phone, and depending upon the service provider and the proximity to any highways, the 911 call may be routed to the nearest County Dispatch or it may be routed to the California Highway Patrol. If it is routed to the Highway Patrol, there will be an added delay, which is a significant disadvantage in life or death situations, such as drownings or a near-drownings. If the state of California has systems in place to route 911 calls from cell phones to the nearest dispatch center, then there will not be an issue. However, I am not convinced that such systems are in place throughout the state. Therefore, there must be proper signage to provide instructions to report medical emergencies via 911 **AND** the direct phone number to the local dispatch center. In this case, it is best to provide redundant information.*

Therefore, both “911” **AND** the number of the local emergency medical dispatch center (not one or the other) shall be included on the signage.

- It is also necessary for the sign to include the physical address of the public pool facility. If an individual calls from a cell phone that does not have GPS capability – and they are in a panic – then they will need to tell the dispatcher the name of the facility and what the address is in order to send the appropriate medical personnel.

[I did not mention this idea in my public comments for the Title 22 Regulations. Perhaps the requirement to post the physical address should be in both Title 22 and in Title 24.]

Title 22 includes a requirement for an “operational telephone.” Perhaps the same requirement should be in Title 24? In my comments to the Title 22 regulations I specified that the “operational telephone” must be an “operational landline telephone.”

Please refer to my suggestions made on this topic for the recently proposed Title 22 Regulations, dated June 23, 2011:

Section 65540. Safety and First Aid Equipment

The proposed regulations require:

(b)(2) An operating telephone

This is not a sufficient requirement. Instead the requirement must state:

*An operating **landline** telephone*

In the event of an emergency and if enhanced dispatch is available, then the dispatch center will automatically know the location of the incident and will also automatically know which units to dispatch to the scene. If a "landline phone" is not specified, then the pool operators may only provide a cell phone, which may not have similar enhanced dispatch capabilities. In my opinion, larger hotel swimming pools should also provide access to an emergency phone line that is in a waterproof box. This requirement can go into effect based upon the maximum occupancy of the hotel.

In the cardiac chain of survival, the links are "early notification," "early CPR," "early defibrillation (via on-site AED unit), and "early advanced care (meaning advanced life support via paramedics or hospital care). Please also refer to the attached article from Emergency Management News entitled "School Administrators Unaware of Enhanced 911 Solutions, Survey Finds."

In my opinion, the California Department of Public Health should provide a template for signage to include:

- The graphic of the AHA Chain of Survival
- A line to provide "911" AND the "local medical dispatch number"
- A line for the name and street address for the public pool facility.
- AHA instructions for compressions-only CPR for adults and for children

Section 3120B.11 Diarrhea

Please refer to my suggestions made on this topic for the recently proposed Title 22 Regulations, dated June 23, 2011:

Section 65541 Health of Employees and Pool Users

(b) No pool worker or pool user having a communicable disease while in an infectious state that included suffering from a cough, cold or sores, nasal or ear discharges or wearing bandages shall be allowed to enter the pool water unless... [submits a written statement signed by a licensed physician]

How are the pool workers and the pool users with "communicable disease while in an infectious state" or "cough, cold or sores, etc." to know if they should not enter the water if there is no public signage? Are the employees who work at the front desk expected to perform a mini physical exam to assess each potential pool user as they pay their fees to enter the facility?

Diarrhea:

(c) Pool workers or pool users having diarrhea currently active or active within the previous 14 days shall not be allowed to enter the pool water.

In the "Prevalence of Parasites in Fecal Material from Chlorinated Swimming Pools --- United States, 1999" bulletin, the CDC states:

Swimmers should be informed by public health professionals and the aquatics industry that healthy swimming practices necessitate that patrons refrain from swimming while ill with diarrhea...

[Notice how the CDC did not state: "refrain from swimming for 14 days after having been ill with diarrhea for any reason."]

And from the CDC's "Prevention & Control of Cryptosporidiosis":

If diagnosed with cryptosporidiosis, do not swim for at least 2 weeks after diarrhea stops.

In my opinion, the State of California should not prohibit persons who have had diarrhea for **ANY** reason from entering public pool water for 14 days. A shorter exclusion period would be more reasonable. However, as the CDC suggests, it would be advisable to prevent persons who have been diagnosed with Cryptosporidiosis from entering public pool water for 14 days.

In "Hyperchlorination to kill Cryptosporidium," the CDC also states:

Although hyperchlorination destroys Crypto's infectivity, it does not necessarily destroy the structure of the parasite.

Also in my opinion, the California Department of Public Health must concentrate on creating regulations that will actually attempt to guarantee public pool water safety. In the current draft regulations there is no mention of UV treatment for pool water, even though that is one method that is effective in killing Cryptosporidium. In addition to killing Crypto, UV light also kills other common pathogens, such as E. Coli. Please refer to the attached article "UV in Swimming Pools and Water Parks" by Ismail Gobulukoglu, Ph.D. In the conclusion, Dr. Gobulukoglu states:

A properly sized UV system successfully controls chloramines; increases comfort and health for swimmers and staff; eliminates the need for dilution and super chlorination; reduces corrosion and, most importantly, protects against Cryptosporidium and Giardia.

Although the US Centers for Disease Control and Prevention does not mention UV treatment of swimming pool water in its literature, such technology is available and in widely used in throughout the US. Please refer to and incorporate "NSF / ANSI Standard 50 – Equipment for Pools, Spas, Hot Tubs, and Other Recreational Water Facilities (2010)."

Will it cost money for public pool operators to upgrade equipment in order to follow NSF / ANSI Standard 50, 2010, in the short-term? Yes, it will. Will those public pool operators likely spend less money on chemical disinfectants, such as chlorine and expensive repairs that would have been caused by corrosion over the long-term? Yes, they will. And will implementing NSF / ANSI Standard 50, 2010, properly protect the public health? Due to CA Health & Safety Code §116050, I understand that requiring UV retrofits to existing construction and creating UV standards for new construction will require legislative action, which must be explored.

Diarrhea is not the ONLY communicable medical condition to be concerned about at public swimming pools. Therefore, there must be signage to notify the pool users that if they have a known and untreated communicable condition, such as open sores, MRSA, etc., then they must refrain from entering the pool water. There must be consistency between the Title 22 requirements and Title 24 requirements to notify individuals who have communicable medical conditions to not use the public pool.

I have noticed that the proposed Title 24 regulations do require UV treatment of the water for "Spray Areas" only. Since UV treatment is so effective in the treatment of Cryptosporidium (as noted in the proposed Title 24 Regulations) and for the treatment of chloramines – the byproducts of chlorination that cause skin and eye irritation – then why isn't UV treatment also required for public swimming pool water disinfection systems?

Section 3120B.14 Exit

Where automatic gaseous chemical feeders are used, a sign shall be posted at the pool area entrance that shows in a diagrammatic form an emergency evacuation procedure. Designated emergency exits shall be marked "EXIT."

Since most public swimming pools are located outdoors with cement decks, it would be prudent to paint "Exit" signs on the cement with directional arrows vs. only marking the "Exit" doors (as per the CA Fire Code) and placing one evacuation diagram at the entrance to the facility.

Section 3120B.15 Gaseous Oxidizer

Where automatic gaseous chemical feeders are used, a warning sign with the appropriate hazard identification symbol shall be posted on the exterior side of the door entering the chemical feeder room or area. The sign shall state, "DANGER: GASEOUS OXIDIZER – (specific chemical name)"

The type of signage that is described in this section is according to the US Department of Transportation (DOT) and is for hazardous materials transport vehicles only. For fixed locations, National Fire Protection Association (NFPA) 704 requirements provide the appropriate signage. Therefore, NFPA signage is to be posted on the exterior of the building where the pool chemicals are stored. Please refer to the NFPA description of the four sections of the sign per Wikipedia. According to the attached MSDS for chlorine, the NFPA ratings are:

Health (Blue):	4
Flammability (Red):	0
Reactivity (Yellow):	0
Special (White):	OXY

In my opinion, the CA Department of Public Health should:

- Provide an example of the NFPA sign for chlorine within Title 24
- Include a reference to the OSHA requirement that a copy of the Material Safety Data Sheets (MSDS's) for all of the pool chemicals, including chlorine, must be maintained at the site.

Thank you for your consideration.

Sincerely,



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Attachments:

Public Comments by Catherine Rucker regarding Proposed Title 22 Regulations regarding public swimming pools, dated June 23, 2011, 12 pages

Material Safety Data Sheet (MSDS), "Chlorine," Westlake CA&O, Kentucky

"NPFA 704," www.wikipedia.com

American Heart Association (AHA) "Chain of Survival," 2010 edition (graphic)

"Hands-Only CPR Simplifies Saving Lives for Bystanders," Science Daily, 4/2/2008

"Chain of Survival for Sudden Cardiac Arrest," www.momsteam.com

References:

CDPH Title 24 Proposed Public Pool Regulations, 3/8/2011

CDPH Title 22 Proposed Public Pool Regulations, 3/25/2011

NFPA 704 "Standard System for the Identification of the Hazards of Materials for Emergency Response, 2007 edition, www.npfa.org

Copies to:

Robin Belle Hook, REHS, Environmental Health Services Section Chief
California PTA Health Commission
American Red Cross
American Heart Association
YMCA U.S.A.
California EMS Authority

